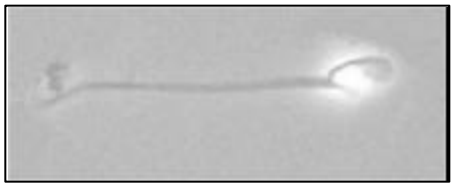
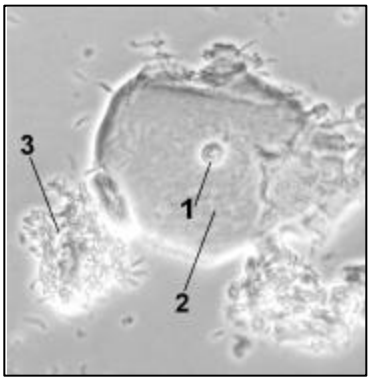
Wet Mount Proficiency Test 2001 B – Critique MSW

Micrograph A

Micrograph A shows a typical sperm cell. "**:** Sperm cell(s)" was the intended answer. The appearance of the thin, tapered, tail which has no observable internal structure and the absence of any budding clearly differentiate this from yeasts or pseudohyphae. The retractile halo around the head of the sperm cell is typical as is the oval shape. Carefully compare this micrograph with Micrograph C below to see the differences between sperm cells and pseudohyphae.

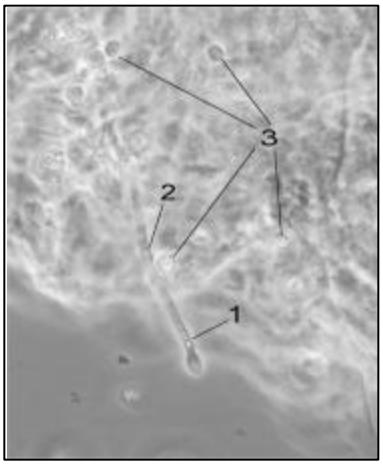


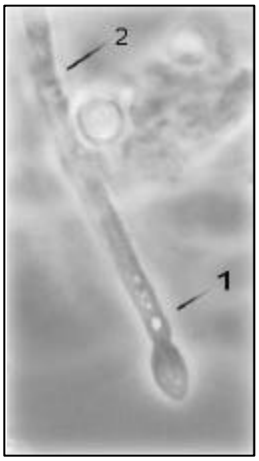
Micrograph B



This phase contrast micrograph shows a typical squamous epithelial cell; the edges of the cell (pointer 2) and the nucleus (pointer 1) are clearly visible. There are no attached surface bacteria, although there are two micro-colonies of bacteria at the lower right and left (pointer 3) of the micrograph. "**:** Squamous epithelial cell(s), not clue cell" was the intended answer.

Micrograph C





Micrograph C is a phase contrast micrograph shows a pseudohyphae with a budding yeast cell at the tip extending from an undifferentiated mass of cellular debris. Some vacuolization can be observed in the pseudohyphae below the budding yeast cell (1) as can a cell wall (2); sperm cell tails would have neither. Individual yeast cells (3) are also observable. The *vague* resemblance to a sperm cell (long filamentous structure with an oval at the end) should not have misled anyone! Several participants identified fungal elements in Micrograph C as "Yeast with buds" which was accepted as it is generally true. However, the correct and intended response was "**:** Pseudohyphae with budding yeast cell(s)".

Pseudohyphae are elongated yeast cells with individual cell walls and have the appearance of fungal filaments (mycelia); they are considered a morphologically distinct element from yeast cells. Some authorities believe that the presence of pseudohyphae indicate a more invasive phase than budding yeast cells alone. The presence of pseudohyphae is particularly typical of *Candida* sp.